In the Claims

Listing of the Claims

This listing of claims will replace all prior versions, and listings, of the claims in the application.

1. (Original) A flow field plate (separator) for a fuel cell or electrolyser, comprising one or more branched primary fluid delivery/removal channels feeding narrower secondary fluid diffusion channels defined by an array of lands forming a network of interconnected fluid diffusion channels therebetween.

2. (Original) A flow field plate, as claimed in Claim 1, in which the flow field comprises a tiled array of flow field segments defining a reactant flow field, each segment comprising one or more branched primary fluid delivery/removal channels feeding narrower secondary fluid diffusion channels defined by an array of lands forming a network of interconnected fluid diffusion channels therebetween.

3. (Original) A flow field plate as claimed in Claim 2, in which the flow field segments are arranged in parallel.

4. (Original) A flow field plate as claimed in Claim 2, in which the flow field segments are arranged in series.

5. (Original) A flow field plate as claimed in Claim 2, in which the flow field segments are arranged as a parallel assembly of series connected flow field segments.

6. (Original) A flow field plate as claimed in Claim 2, in which the flow field segments are arranged as a series assembly of parallel connected flow field segments.

7. (Currently Amended) A flow field plate, as claimed in ~~any one of Claims 1 to 6~~Claim 1, in which the branched primary fluid delivery/removal channels comprise a hexagonal network of channels.

8. (Currently Amended) A flow field plate, as claimed in ~~any one of Claims 1 to 6~~Claim 1, comprising one or more branched fluid delivery channels, interdigitated with one or more branched fluid removal channels, and a permeable wall separating same formed by the array of lands.

9. (Original) A flow field plate as claimed in Claim 8, in which the permeable wall is concertinaed, having wall segments extending along each fold of the wall, and end wall segments at each turn of the wall.

10. (Currently Amended) A flow field plate, as claimed in ~~any one of Claims 1 to 9~~Claim 1, in which the lands are shaped to define fluid diffusion channels having substantially constant width.

11. (Currently Amended) A flow field plate, as claimed in ~~any one of Claims 1 to 9~~Claim 1, in which the lands are shaped to define fluid diffusion channels having a strongly variable channel width.

12. (Original) A flow field plate, as claimed in Claim 11, in which the lands are non-circular and not aligned with the symmetry of the arrangement of the lands.

13. (Original) A flow field plate, as claimed in Claim 12, in which the lands are diamond, square, or triangular shaped lands on a hexagonal array.

14. (Original) A flow field plate, as claimed in Claim 10, in which the lands are polygonal in form.

15. (Original) A flow field plate, as claimed in Claim 14, in which the lands are hexagonal in form.

16. (Currently Amended) A flow field plate, as claimed in ~~any one of Claims 1 to 15~~Claim 1, in which the flow field comprises impermeable barriers separating regions of the

flow field and with apertures in or defined by the impermeable barriers providing choke points for the passage of fluid.

17. (Currently Amended) A flow field plate, as claimed in ~~any one of Claims 1 to 16~~Claim 1, in which the fluid delivery/removal channels and the fluid diffusion channels are gas delivery/removal channels and gas diffusion channels respectively.

18. (Original) A flow field plate, as claimed in Claim 17, in which lands are provided in the gas delivery/removal channels to resist ingress in use of a gas diffusion layer into channels of the flow field.

19. (Currently Amended) A fuel cell comprising one or more flow field plates in accordance with ~~any one of Claims 1 to 18~~Claim 1.

20. (Original) A fuel cell as claimed in Claim 19, in which the power deliverable by each flow field plate is in excess of 750mW.cm^{-2} calculated on the working surface of the flow field.